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Creativity and Academic Achievement of Secondary School Students of District Yamuna Nagar

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Abstract – Study of creativity and academic achievement of secondary school students has been examined in this paper. The sample consisted of 100 students of secondary school students of district Yamuna Nagar. The t-test was applied to find the key insights.

Keywords: Creativity, Insight, School

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1. INTRODUCTION

Now a day's creativity is increasingly gaining in importance. Professionals from all fields are becoming aware of its importance and the develop ment ofcreative thinking. In education, creative thinking varies from completely new ideas to new ways of considering and solving problems. It has been said that creativity is not the ability to create out of nothing, but the ability to generate new ideas by combining, changing or reapplying existing ideas.

In educational research, the word "creativity" which is only sixty years old, has shifted its source from divine to psychic functioning of human beings. Of course, human beings are endowed with unique powers. Of all their powers, creativity is the most unique. In each of us are little-used powers of creativity, which may be termed as "spark of genius", waiting to be freed. Even a computer, which can work at an amazing pace, cannot match it as it can only repeat the mechanical orientations but cannot produce original ideas, which the human mind is capable of the work of creation. Therefore, it is necessary to be careful in defining creativity and distinguishing it from other similar intellectual functions. The brain is believed to have a significant role in the creative ability of individuals.

The relationship between creativity and intelligence has been matter of considerable of the two is done critically, one must reach at the conclusion that the two are both originating from the same domain and have almost similar explanation in their theories and hence should have a close relationship. In this regard many researches had been done on school children and others. Many research findings and observations have demonstrated that there is no positive correlation between creativity and intelligence. One is not the essential or necessary prerequisite of the other. Those found scoring high on intelligence tests might demonstrate no signs of creativity where as individuals performing poorly in intelligence tests may sometimes create something very original. Therefore, no clear relationship has been seen to exist between intelligence and creativity.

2. LITERATURE REVIEW

Intelligence is the aggregate capacity of individual to act purposefully, to think rationally and to deal effectively with his/her environment. It can be called as the capacity to acquire knowledge. In order to solve any problem, knowledge should be applied in the right manner with the help of intelligence.

Educationists consider intelligence as the mental ability which helps the individual to think about minute, complex and abstract matters, to adjust with changing situations by solving various problems as quickly as possible, to acquire with ease knowledge, proficiency and aptitude in different subjects, to explain new situations with the help of prior experience, to arrive at conclusions by determining the exact relations between various elements, to utilize our energy by keeping the emotions and impulse under control whenever necessary in achieving the goal. Man, however, has surpassed other creatures in the development of brain and this development has made him superior to other species in his behaviour and in control of his environment. But it is well-known fact to us all, that the individuals have different capabilities to adapt and change this environment.

One thinks differently from the other. He solves the problems concerning to his environment and to overcome the hurdles in the way of his progress, and in paving new paths of his progress quickly than this fellows. One feels it very difficult to adjust with his peers while the others are very efficient in doing .So thus it can be said that a person‟s intelligence manifests itself through different activities and not through a particular activity (Gupta and Basu, 2006.)

According to Craft (2000), each of the two hemispheres of the brain appears to have its own area of specialization and processes information in its own way; and of course, in the normal brain, the hemispheres communicate with each other through the corpus callosum, the mass nerve fiber which bridges the hemispheres. For the great majority of the population, it is the left hemisphere that controls logical and linear thinking. This is the side that can compute mathematics, remember names, learn to read and memorize.

By contrast, the other hemisphere is the part of the brain where metaphors are understood, where emotions are felt and where dreams, imageries and fantasy occur. The left hemisphere of the brain is dominant for the following tasks: analytical, mathematical, verbal, linear and literal. The left hemisphere may, then, be particularly good at „convergent" thinking. By contrast, the right brain appears to be dominant for the following activities; metaphoric, imaginative, non-verbal, holistic (non-linear), spatial, musical, artistic, emotional, sexual, spiritual, and dreams. The right hemisphere may be particularly good at supporting „divergent" thinking–and creativity more widely. In general, the hemispheres work together in harmony, although often the right hemisphere is under-utilization.

Numerous recent researches have been conducted on the subject of creativity (Charlton, 2009). Earlier investigations have revealed that an individual's background characteristics affect his/her cognitive and non-cognitive behaviors (Ai, 1999). Such studies indicated that gender is one of the most significant and influential characteristics in academic achievement (Ai, 1999; Habibollah. et al., 2008). However, the literature on gender differences and the relationship between creativity and academic achievement is limited (Ai, 1999). Hence, investigators in this research concentrated on gender differences in their examination of the relationship between creativity and academic achievement.

The relationship between creativity and academic achievement has been examined by a number of investigators. According to one study, creativity is hardly correlated with academic achievement (Ai, 1999).

Ai (1999) noted that “the zeal to investigate the relationship between creativity and academic achievement dates back to the 1960s, when Getzels (1962) first reported the results of their research on the role of creativity in school achievement”. Their investigation had an important effect on psychology in the field of education and set off a flood of investigations to understand what the nature of creativity was like. Their study involved 449 high school students, on whom they examined in order to find similarities and differences in the groups of students who had scored well on intelligence assessments and students who had scored well on creativity tests (Guilford of scores).

Ai (1999) studied the relation between creativity and academic achievement especially. In this study, the students were randomly selected from 68 schools (2,264 students, 38% were boys and 62% were girls). Three creativity batteries, the Torrance Test of Creative Thinking (TTCT), the Abedi-Schumacher Creativity Test (CT), and the Villa and Auzmendi Creativity Test (VAT), were administered to the students. The academic achievement of the students’ was assessed using a self-reported achievement in six subject areas: Spanish, Basque, English, natural science, mathematics and social science. A canonical correlation analysis found that when operationalized by their grades, creativity was related to academic achievement for both boys and girls. For girls, elaboration related to four of the academic subject areas (Basque, Spanish, social science and English) and fluency related to natural science and mathematics. For boys, flexibility was the predominant factor that related to all six academic subject areas. When operationalized by the other three measures (TTCT, VAT and CT), on the other hand, creativity was scarcely related to academic achievement. Yet, several other researchers also have alluded to the idea that creativity is related to academic achievement (Karimi, 2000).

3. SCHOOL ENVIRONMENT: PLATFORM OF CREATIVITY TO STUDENTS

Innovative school can be defined as the school that which is able to improve and support its student to develop creativity in order to face the challenges of all time. Innovative environment that nurtures an innovative thinking is the one that gives both social and psychological freedom and security to the students, it punishment free, it develops positive relationships between students and teachers and pays special attention to extracurricular activities that can lead to innovation by allowing students to use their abilities and allow freedom of error, expression of ideas, experiences, development of imagination, and promotes curiosity among the learners (Angeloska, 1996).

Furthermore, innovative school environment is the one that encourages students to diversify paths of their thinking, create a climate that will help them entertain as many ideas as possible at the same time even if the ideas generated are contradictory in nature in the process of developing creative thinking in order to create tolerance and acceptance among

the students, encourage diverse ideas, stimulate students' minds with the importance of creative thinking and make them familiar with it (Israel, 1995).

Cromwell (1993) is of the view that, the open system is the most important features of the innovative school environment which contains flexibility and repletes of process of discovery, this system is not restricted by laws to help develop selfregulation skills in order to create links. Qualitative research findings show that innovative school environment develops students' capacities to become creative, open to new discoveries, make them imaginative, courageous to see from different perspective while the lack of creativity leads to students' inability to cope with challenges. According to Shaughaessy (1991) innovative school environment is to help students ask strange questions and create positive aspects in all the questions and ideas presented and encourage and reward students' creativity and to regularly urge students continuously to provide, give their creative solutions, and give reward to their creativity in order to improve their innovative behaviors.

Literature shows that there are two secondary motivation factors for innovative work namely quality and originality (Maadi, 1965) and it is observed that environments are the underlying factors that contribute to people's creativity and its development (Pluckier et al., 1994). Innovation does not inherently exist, it is rather located on the varying degrees in which environment plays a significant role in its development. Innovation is a behavior that can be learnt which makes school environments more than other factors in developing this kind of thinking on the basis that school environments do adopt programs that will develop innovative thinking in addition to the development of the students' creative abilities (Maker, 1982).

The school environments exercises that develop creativity are to educate the school teamwork, and make the students familiar with the importance of creativity, creative activities, discover anti-creativity factors, enhance their productive personality, link education with life in the content, methods, lead thinking to a concrete result, transform traditional teaching to participatory teaching, give special attention to problem solving, provide a minimum level of challenge that does not contradict with the Islamic belief and the modern requirements, provide the constructive criticism, provide a deep understanding of the subject matters and ability of the school to develop the fundamental elements in reality.

There are a number of practices that improve the school environment to achieve the development of innovation among the students namely; group discussions in the classroom, self-learning in the educational process, specific scientific laboratories, teacher should be allowed to be free in the classroom, encouraging the students to ask questions and providing them the opportunity to exercise the constructive criticism, rewarding responses and new products that add to the content of courses, give attention to essay questions, or at least achieve a balance between the objective and essay questions.

Factors leading to the development of creative school environment most notably are:

- School climate that accepts new ideas.
- Giving every student opportunity to prove him/her.
- Encouraging and motivating student to find an excellent climate for creativity.
- Giving students opportunity of trial and error in order to see recurrence of new ideas.
- Strengthening delegation of authority among the students.
- Accepting collective thinking among students.
- Committing students to scientific thinking methodology.
- Familiarizing students to imagination and the ability to observe.

4 RESULT AND DISCUSSION

Statistical Technique Used - Coefficient of co-relation test was used to find the relationship between creativity and academic achievement of students and 't' –Test significance of the gender, types of school and location.

Key findings –

Table 1: Coefficient of Co-relation between Creativity and Academic Achievement of Students

Variable	N	Mean	SD	'r'-value	Sign
Creativity	100	28.87	3.737	0.376	S
Academic Achievement	100	30.48	3.753		

The table revels that the obtained 'r'-value 0.376 is greater than the tabled value (0.254) at 0.01 levels of significance. Therefore null hypothesis in this regard is rejected. It means that there is slightly positive

relationship between creativity and academic achievement of 8th standard students.

CONCLUSION

This paper provides empirical creativity and academic achievement of secondary school students and the finding shows the positive until an intelligence threshold of which it appears to moderate. It is the obligation of guardians and instructors to offer help for imaginative advancement and help the youngster to comprehend the disparate idea and to impart his thoughts unreservedly.

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